



FIG. 1A

Frame 2

ATG	CAT	GGA	GTG	GAC	CTG	TAG	GCG	ACT	TGC	ATC	GTC	TTC	AAC	M	K	I	A
		10			19			28			37			46			55

T V S V L L P L A L C L I Q D A A S K N HF 6479  
ACA GTG TCA GTG CTT CTG CCC TTG GCT CTT TGC CTC ATA CAA GAT GCT GCC AGT AAG AAT  
64 73 82 91 100 109

Repeat 1

E	D	Q	E	M	C	H	E	F	Q	A	F	M	K	N	G	K	L	F	C
GAA	GAT	CAG	GAA	ATG	TGC	CAT	GAA	TTT	CAG	GCA	TTT	ATG	AAA	AAT	GGA	AAA	CTG	TTC	TGT
		124			133			142			151			160			169		

P Q D K K F F Q S L D G I M F I N K C A  
CCC CAG GAT AAG AAA TTT TTT CAA AGT CTT GAT GGA ATA ATG TTC ATC AAT AAA TGT GCC  
184 193 202 211 220 229

HF 6479

T	C	K	M	I	L	E	K	E	A	K	S	Q	K	R	A	R	H	L	A
ACG	TGC	AAA	ATG	ATA	CTG	GAA	AAA	GAA	GCA	AAA	TCA	CAG	AAG	AGG	GCC	AGG	CAT	TTA	GCA
		244			253			262			271			280			289		

typical Kazal domain 1

R	A	P	K	A	T	A	P	T	E	L	N	C	D	D	F	K	K	G	E
AGA	GCT	CCC	AAG	GCT	ACT	GCC	CCA	ACA	GAG	CTG	AAT	TGT	GAT	GAT	TTT	AAA	AAA	GGA	GAA
		304			313			322			331			340			349		

R D G D F I C P D Y Y E A V C G T D G K  
AGA GAT GGG GAT TTT ATC TGT CCT GAT TAT TAT GAA GCT GTT TGT GGC ACA GAT GGG AAA  
364 373 382 391 400 409

T Y D N R C A L C A E N A K T G S Q I G  
ACA TAT GAC AAC AGA TGT GCA CTG TGT GCT GAG AAT GCG AAA ACC GGG TCC CAA ATT GGT  
424 433 442 451 460 469

Repeat 2

V	K	S	E	G	E	C	K	S	S	N	P	E	Q	D	V	C	S	A	F
GTA	AAA	AGT	GAA	GGG	GAA	TGT	AAG	AGC	AGT	AAT	CCA	GAG	CAG	GAT	GTA	TGC	AGT	GCT	TTT
		484			493			502			511			520			529		

R P F V R D G R L G C T R E N D P V L G  
CGG CCC TTT GTT AGA GAT GGA AGA CTT GGA TGC ACA AGG GAA AAT GAT CCT GTT CTT GGT  
544 553 562 571 580 589

P D G K T H G N K C A M C A E L F L K E  
CCT GAT GGG AAG ACG CAT GGC AAT AAG TGT GCA ATG TGT GCT GAG CTG TTT TTA AAA GAA  
604 613 622 631 640 649

A E N A K R E G E T R I R R N A E K D F  
GCT GAA AAT GCC AAG CGA GAG GGT GAA ACT AGA ATT CGA CGA AAT GCT GAA AAG GAT TTT  
664 673 682 691 700 709

Repeat 3

C	K	E	Y	E	K	Q	V	R	N	G	R	L	F	C	T	R	E	S	D
TGC	AAG	GAA	TAT	GAA	AAA	CAA	GTG	AGA	AAT	GGA	AGG	CTT	TTT	TGT	ACA	CGG	GAG	AGT	GAT
		724			733			742			751			760			769		

P V R G P D G R M H G N K C A L C A E I  
CCA GTC CGT GGC CCT GAC GGC AGG ATG CAT GGC AAC AAA TGT GCC CTG TGT GCT GAA ATT  
784 793 802 811 820 829

F K R R F S E E N S K T D Q N L G K A E  
TTC AAG CGG CGT TTT TCA GAG GAA AAC AGT AAA ACA GAT CAA AAT TTG GGA AAA GCT GAA  
844 853 862 871 880 889

Repeat 4

E	K	T	K	V	K	R	E	I	V	K	L	C	S	Q	Y	Q	N	Q	A
GAA	AAA	ACT	AAA	GTT	AAA	AGA	GAA	ATT	GTG	AAA	CTC	TGC	AGT	CAA	TAT	CAA	AAT	CAG	GCA
		904			913			922			931			940			949		



# FIG. 1B

#  
K N G I L F C T R E N D P I R G P D G K  
AAG AAT GGA ATA CTT TTC TGT ACC AGA GAA AAT GAC CCT ATT CGT GGT CCA GAT GGG AAA  
964 973 982 991 1000 1009

#  
M H G N L C S M C Q V Y F Q A E N E E K  
ATG CAT GGC AAC TTG TGT TCC ATG TGT CAA GTC TAC TTC CAA GCA GAA AAT GAA GAA AAG  
1024 1033 1042 1051 1060 1069

—> HF 7665  
K K A E A R A R N K R E S G K A T S Y A  
AAA AAG GCT GAA GCA CGA GCT AGA AAC AAA AGA GAA TCT GGA AAA GCA ACC TCA TAT GCA  
1084 1093 1102 1111 1120 1129

## Repeat 5

#  
E L C N E Y R K L V R N G K L A C T R E  
GAG CTT TGC AAT GAA TAT CGA AAG CTT GTG AGG AAC GGA AAA CTT GCT TGC ACC AGA GAG  
1144 1153 1162 1171 1180 1189

#  
N D P I Q G P D G K V H G N T C S M C E  
AAC GAT CCT ATC CAG GGC CCA GAT GGG AAA GTG CAC GGC AAC ACC TGC TCC ATG TGT GAG  
1204 1213 1222 1231 1240 1249

HF 7665 <—  
V F F Q A E E E E K K K K E G E S R N K  
GTC TTC TTC CAA GCA GAA GAA GAA GAA AAG AAA AAG GAA GGC GAA TCA AGA AAC AAA  
1264 1273 1282 1291 1300 1309

## Repeat 6

#  
R Q S K S T A S F E E L C S E Y R K S R  
AGA CAA TCT AAG AGT ACA GCT TCC TTT GAG GAG TTG TGT AGT GAA TAC CGC AAA TCC AGG  
1324 1333 1342 1351 1360 1369

#  
K N G R L F C T R E N D P I Q G P D G K  
AAA AAC GGA CGG CTT TTT TGC ACC AGA GAG AAT GAC CCC ATC CAG GGC CCA GAT GGG AAA  
1384 1393 1402 1411 1420 1429

#  
M H G N T C S M C E A F F Q Q E E R A R  
ATG CAT GGC AAC ACC TGC TCC ATG TGT GAG GCC TTC TTT CAA CAA GAA GAA AGA GCA AGA  
1444 1453 1462 1471 1480 1489

## Repeat 7

#  
A K A K R E A A K E I C S E F R D Q V R  
GCA AAG GCT AAA AGA GAA GCT GCA AAG GAA ATC TGC AGT GAA TTT CGG GAC CAA GTG AGG  
1504 1513 1522 1531 1540 1549

#  
N G T L I C T R E H N P V R G P D G K M  
AAT GGA ACA CTT ATA TGC ACC AGG GAG CAT AAT CCT GTC CGT GGA CCA GAT GGC AAA ATG  
1564 1573 1582 1591 1600 1609

#  
H G N K C A M C A S V F K L E E E E K K  
CAT GGA AAC AAG TGT GCC ATG TGT GCC AGT GTG TTC AAA CTT GAA GAA GAA GAG AAG AAA  
1624 1633 1642 1651 1660 1669

#  
N D K E E K G K V E A E K V K R E A V Q  
AAT GAT AAA GAA GAA AAA GGG AAA GTT GAG GCT GAA AAA GTT AAG AGA GAA GCA GTT CAG  
1684 1693 1702 1711 1720 1729

## Repeat 8

#  
E L C S E Y R H Y V R N G R L P C T R E  
GAG CTG TGC AGT GAA TAT CGT CAT TAT GTG AGG AAT GGA CGA CTC CCC TGT ACC AGA GAG  
1744 1753 1762 1771 1780 1789

#  
N D P I E G L D G K I H G N T C S M C E  
AAT GAT CCT ATT GAG GGT CTA GAT GGG AAA ATC CAC GGC AAC ACC TGC TCC ATG TGT GAA  
1804 1813 1822 1831 1840 1849

#  
A F F Q Q E A K E K E R A E P R A K V K  
GCC TTC TTC CAG CAA GAA GCA AAA GAA GAA AGA GCT GAA CCC AGA GCA AAA GTC AAA  
1864 1873 1882 1891 1900 1909

## Repeat 9

#  
R E A E K E T C D E F R R L L Q N G K L



FIG. 1C

AGA	GAA	GCT	GAA	AAG	GAG	ACA	TGC	GAT	GAA	TTT	CGG	AGA	CTT	TTG	CAA	AAT	GGA	AAA	CTT
1924				1933			1942			1951			1960				1969		
#																			
F	C	T	R	E	N	D	P	V	R	G	P	D	G	K	T	H	G	N	K
TTC	TGC	ACA	AGA	GAA	AAT	GAT	CCT	GTG	CGT	GGC	CCA	GAT	GGC	AAG	ACC	CAT	GGC	AAC	AAG
1984				1993			2002			2011			2020			2029			
#																			
C	A	M	C	K	A	V	F	Q	K	E	N	E	E	R	K	R	K	E	E
TGT	GCC	ATG	TGT	AAG	GCA	GTC	TTC	CAG	AAA	GAA	AAT	GAG	GAA	AGA	AAG	AGG	AAA	GAA	GAG
2044				2053			2062			2071			2080			2089			
E	D	Q	R	N	A	A	G	H	G	S	S	G	G	G	G	G	N	T	Q
GAA	GAT	CAG	AGA	AAT	GCT	GCA	GGA	CAT	GGT	TCC	AGT	GGT	GGT	GGA	GGA	GGA	AAC	ACT	CAG
2104				2113			2122			2131			2140			2149			
Repeat 10																			
#																			
D	E	C	A	E	Y	Q	E	Q	M	K	N	G	R	L	S	C	T	R	E
GAC	GAA	TGT	GCT	GAG	TAT	CAG	GAA	CAA	ATG	AAA	AAT	GGA	AGA	CTC	AGC	TGT	ACT	CGG	GAG
2164				2173			2182			2191			2200			2209			
#																			
S	D	P	V	R	D	A	D	G	K	S	Y	N	N	Q	C	T	M	C	K
AGT	GAT	CCT	GTA	CGT	GAT	GCT	GAT	GGC	AAA	TCG	TAC	AAC	AAT	CAG	TGT	ACC	ATG	TGT	AAA
2224				2233			2242			2251			2260			2269			
A	K	L	E	R	E	A	E	R	K	N	E	Y	S	R	S	R	S	N	G
GCA	AAA	TTG	GAA	AGA	GAA	GCA	GAG	AGA	AAA	AAT	GAG	TAT	TCT	CGC	TCC	AGA	TCA	AAT	GGG
2284				2293			2302			2311			2320			2329			
Repeat 11																			
#																			
T	G	S	E	S	G	K	D	T	C	D	E	F	R	S	Q	M	K	N	G
ACT	GGA	TCA	GAA	TCA	GGG	AAG	GAT	ACA	TGT	GAT	GAG	TTT	AGA	AGC	CAA	ATG	AAA	AAT	GGA
2344				2353			2362			2371			2380			2389			
#																			
K	L	I	C	T	R	E	S	D	P	V	R	G	P	D	G	K	T	H	G
AAA	CTT	ATC	TGC	ACT	CGA	GAA	AGT	GAC	CCT	GTC	CGG	GGT	CCA	GAT	GGC	AAG	ACA	CAT	GGT
2404				2413			2422			2431			2440			2449			
#																			
N	K	C	T	M	C	K	E	K	L	E	R	E	A	A	E	K	K	K	K
AAT	AAG	TGT	ACT	ATG	TGT	AAG	GAA	AAA	CTG	GAA	AGG	GAA	GCA	GCT	GAA	AAA	AAA	AAG	AAA
2464				2473			2482			2491			2500			2509			
E	D	E	D	R	S	N	T	G	E	R	S	N	T	G	E	R	S	N	D
GAG	GAT	GAA	GAC	AGG	AGC	AAT	ACA	GGA	GAA	AGG	AGC	AAT	ACA	GGA	GAA	AGG	AGC	AAT	GAC
2524				2533			2542			2551			2560			2569			
Repeat 12																			
#																			
K	E	D	L	C	R	E	F	R	S	M	Q	R	N	G	K	L	I	C	T
AAA	GAG	GAT	CTG	TGT	CGT	GAA	TTT	CGA	AGC	ATG	CAG	AGA	AAT	GGA	AAG	CTT	ATC	TGC	ACC
2584				2593			2602			2611			2620			2629			
#																			
R	E	N	N	P	V	R	G	P	Y	G	K	M	H	I	N	K	C	A	M
AGA	GAA	AAT	AAC	CCT	GTT	CGA	GGC	CCA	TAT	GGC	AAG	ATG	CAC	ATC	AAT	AAA	TGT	GCT	ATG
2644				2653			2662			2671			2680			2689			
#																			
C	Q	S	I	F	D	R	E	A	N	E	R	K	K	K	D	E	E	K	S
TGT	CAG	AGC	ATC	TTT	GAT	CGA	GAA	GCT	AAT	GAA	AGA	AAA	AAG	AAA	GAT	GAA	GAG	AAA	TCA
2704				2713			2722			2731			2740			2749			
Repeat 13																			
#																			
S	S	K	P	S	N	N	A	K	D	E	C	S	E	F	R	N	Y	I	R
AGT	AGC	AAG	CCC	TCA	AAT	AAT	GCA	AAG	GAT	GAG	TGC	AGT	GAA	TTT	CGA	AAC	TAT	ATA	AGG
2764				2773			2782			2791			2800			2809			
#																			
N	N	E	L	I	C	P	R	E	N	D	P	V	H	G	A	D	G	K	F
AAC	AAT	GAA	CTC	ATC	TGC	CCT	AGA	GAG	AAT	GAC	CCA	GTG	CAC	GGT	GCT	GAT	GGA	AAG	TTC
2824				2833			2842			2851			2860			2869			
#																			
Y	T	N	K	C	Y	M	C	R	A	V	F	L	T	E	A	L	E	R	A
TAT	ACA	AAC	AAG	TGC	TAC	ATG	TGC	AGA	GCT	GTC	TTT	CTA	ACA	GAA	GCT	TTG	GAA	AGG	GCA
2884				2893			2902			2911			2920			2929			
K	L	Q	E	K	P	S	H	V	R	A	S	Q	E	E	D	S	P	D	S
AAG	CTT	CAA	GAA	AAG	CCA	TCC	CAT	GTT	AGA	GCT	TCT	CAA	GAG	GAA	GAC	AGC	CCA	GAC	TCT
2944				2953			2962			2971			2980			2989			

typical Kazal domain 2



FIG. 1D

F	S	S	L	D	S	E	M	C	K	D	Y	R	V	L	P	R	I	G	Y
TTC	AGT	TCT	CTG	GAT	TCT	GAG	ATG	TGC	AAA	GAC	TAC	CGA	GTA	TTG	CCC	AGG	ATA	GGC	TAT
	3004				3013			3022			3031			3040			3049		
#																			
L	C	P	K	D	L	K	P	V	C	G	D	D	G	Q	T	Y	N	N	P
CTT	TGT	CCA	AAG	GAT	TTA	AAG	CCT	GTC	TGT	GGT	GAC	GAT	GGC	CAA	ACC	TAC	AAC	AAT	CCT
	3064				3073			3082			3091			3100			3109		
#																			
C	M	L	C	H	E	N	L	I	R	Q	T	N	T	H	I	R	S	T	G
TGC	ATG	CTC	TGT	CAT	GAA	AAC	CTG	ATA	CGC	CAA	ACA	AAT	ACA	CAC	ATC	CGC	AGT	ACA	GCG
	3124				3133			3142			3151			3160			3169		
+																			
K	C	E	E	S	S	T	P	G	T	T	A	A	S	M	P	P	S	D	E
AAG	TGT	GAG	GAG	AGC	AGC	ACC	CCA	GGA	ACC	ACC	GCA	GCC	AGC	ATG	CCC	CCG	TCT	GAC	GAA
	3184				3193			3202			3211			3220			3229		
TGA	CAG	GAA	GAT	TGT	TGA	AAG	CCA	TGA	GGG	AAA	AAA	TAA	ACC	CCA	GTT	CTG	AAT	CAC	CTA
	3244				3253			3262			3271			3280			3289		
CCT	TCA	CCA	TCT	GTA	TAT	ACA	AAG	AAT	TCT	TCG	GAG	CTT	GTC	TTA	TTT	GCT	ATA	GAA	AAC
	3304				3313			3322			3331			3340			3349		
AAT	ACA	GAG	CTT	TTG	GGA	ATG	GAA	TCA	CTG	ATT	TTC	AGT	CTT	TTC	CAT	TTC	TTT	CCT	CCT
	3364				3373			3382			3391			3400			3409		
AGA	ATC	TGT	GAT	CTG	AGG	GTA	TAA	AGA	CAT	TTC	CAC	CAA	GTT	TGA	GCC	CTC	AAA	ATG	TCC
	3424				3433			3442			3451			3460			3469		
TGA	TTA	CAA	TGC	TGT	CTG	TCC	AAC	TGC	polyadenylation signal										
	3484				3493			3502			3511			3520			3529		

.....poly(A) tail

The following sequence corrections have been performed:

An additional A in position 2510 results in a frame shift which produces three additional inhibitor domains.

Base were exchanged in ten different positions:

Position 551: G for A  
Position 1207: C for T  
Position 1258: C for T  
Position 1261: C for T  
Position 2175: A for G  
Position 2950: G for A  
Position 3228: C for T  
Position 3284: C for T  
Position 3324: C for T  
Position 3337: C for T

SEQUENZPROTOKOLL

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